CONFIDENTIAL

11 May 1961

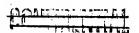
HUMORAHUM FOR: Chief, ADPRS/MGE/S

SUMMECT

: Order for HM 1/10 System

- 1. Attached is a memorandum for the Procurement Division, OL, requesting that the order for an IEI 1901 system previously approved by your office be canceled, and that an order for an IEM 1910 system be substituted.
 - 2. The following are our reasons for this change:
- a. The purposes of both systems are to convert the present 650 Locator application to a more efficient, less coulty system, and to provide the basis on which our lain Takex will be built. Present indications are that the 1401 does not have the processing speed necessary for the Index, but that the 1410 may have.
- b. The 1410 system has were powerful communication and the first bility in its move instrictions.
- c. The 1/10 has the possibility of core storage five times as great as that of the 1/101.
- d. Another important factor in this change is the future availability of the as yet unamounced (and therefore "C pany Confidential") Advanced Disk File (ADF). Indications (Avaitous on the characteristics of the ADF are that:
- (1) The ADF will be amounted for the 1/410 and not the 1/41.
- (2) The per million character storage cost of the AFF will be slightly lower than that of the present 1405.

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- (3) The ADF will be available in time for the expected delivery of this 1410 system (Jamuary 1962).
- (4) There will be a capacity of five ADFs per system as compared with five 1405s per system. This would give the 1410 system two and one-half million characters of random access storage as compared with one million for the 1401.
- (5) The ADF will have a reading head for each disk surface, thus considerably reducing the seek time for records.
- (6) Because of this reduced seek time and computing overlap with seek time, it is expected that the time to process the Locator, as now constituted, will be reduced by almost one—third. This will free the system to provide prime shift time for other applications. This is not true for the 650, which is used eight hours per day on the Locator and it is estimated that this cannot be materially reduced on a 1401 RAMAC system.
- (7) The delay in the delivery of the Index means that our Document Retrieval System will be delivered substantially in advance of the very large capacity memory. For the system to function in the meantime we will need a large random access memory to store document machine addresses. We will need a 60 million character capacity by the time of the delivery of the Document Files, increasing to approximately 90 million before the delivery of the Index.
- e. The 1410 system will allow us to simulate Index programing. Machine language for this purpose is available.
- f. The increased cost of the 1410 system over the 1401 system of \$2,000 per month chould be more than offset by the increased availability of prime shift time alone.
- 3. Since the ADF has not been announced, it is necessary to order the 1410 system with the 1405 Disk Storage. When the ADF is available, it is our intention to change from the two present models with 40 million storage to two models of the ADF with 50 million storage, to be further increased as necessary.

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4. Your approval is requested.

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Assistant Executive Officer DD/F

Attachment - a/s